Sunflower Army Ammunition Plant — Proposed NPL

Size: 9,065 acres
Mission: Manufactured smokeless powder and propellants; on standby status for production of nitroguanidine
HRS Score: 50.00; proposed for NPL in February 1995
IAG Status: None
Contaminants: Nitrates, sulfates, lead, chromium, and propellants
Media Affected: Groundwater, surface water, sediment, and soil
Funding to Date: $13.8 million
Estimated Cost to Completion (Completion Year): $54.5 million (FY2025)
Final Remedy in Place or Response Complete Date for All Sites: FY2014

De Soto, Kansas

Restoration Background

The Sunflower Army Ammunition Plant began operations in 1942. Its primary mission was to manufacture smokeless powder and propellants. Additional installation operations included the manufacture and regeneration of nitric and sulfuric acids and munitions proving. The installation no longer has a mission, and all real property is being designated as excess. Sources of contamination at the installation include production line areas, magazine storage areas, and 50 RCRA solid waste management units (SWMUs). EPA proposed placing the installation on the National Priorities List (NPL) after they evaluated five munitions manufacturing surface impoundments as potential sources of hazardous waste.

Prominent site types at the installation include landfills, open burn and open detonation (OB/OD) areas, propellant production areas, dump sites, a battery handling area, settling ponds, wastewater lagoons, and drainage ditches.

A groundwater contamination survey in FY87 and a Site Inspection in FY88 revealed contaminated groundwater at the installation. Results of analysis also indicated contamination of surface water and sediment with heavy metals. Interim Actions at the installation have included removal of underground storage tanks and associated contaminated soil and cleanup of an asbestos dump site.

The technical review committee, including representatives from EPA, the Kansas Department of Health and Environment (KDHE), the U.S. Army Corps of Engineers, and contractors, continues to meet monthly to discuss restoration activities and devise ways of accelerating Remedial Actions.

The Army completed an Ecological Risk Assessment for the entire installation and submitted the document to EPA and KDHE for review. The assessment concluded that no further action was necessary for most of the areas studied. A final survey of benthic macroinvertebrates was completed; the survey concluded that biological features of surface water appear to be in good condition. A 1996 visit and summary conducted by the Agency for Toxic Substances and Disease Registry identified no specific environmental or public health concerns related to the installation.

In FY97, the installation completed the site cleanup for SWMU 50 (South). RCRA Facility Investigations (RFIs) for eight SWMUs were also completed. The installation completed Relative Risk Site Evaluations for all sites.

FY98 Restoration Progress

The Army completed the restoration of the remaining wastewater lagoon. The installation also completed soil and groundwater sampling and analysis and finished investigations of SWMUs. The Army continues to participate in a phytoremediation study of sites contaminated with lead; this study is being funded by the Army Environmental Center and conducted by the Tennessee Valley Authority. EPA and state regulators approved the Army's Ecological Risk Assessment for the installation and the community relations plan.

The installation did not complete the planned Interim Remedial Actions for SWMU 50 (North) due to a change in priorities and increased project scope. The commander converted the technical review committee to a Restoration Advisory Board, which meets every 2 months.

Plan of Action

- Complete RFIs for SWMUs 14, 21, 24, 25, 30, 33, 34, 35 and 36 in FY99
- Complete Interim Remedial Actions for SWMU 50 (North) in FY99
- Complete an inventory of off-site wells in FY99
- In FY99, begin long-term monitoring of groundwater beneath the lagoons
- Complete the grazing study in FY99
- Complete closure of the OB/OD site (SWMU 23) in FY99
- Complete the field evaluation of two new SWMUs in FY99
- Complete groundwater investigations for OU1 in FY99

FY99 Funding by Phase and Relative Risk